



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------------|---------------------|------------------|
| 10/521,744 | 01/19/2005 | Michael Richard Richardson | 19943 (XA2018) | 6844 |

23389 7590 03/15/2007
SCULLY SCOTT MURPHY & PRESSER, PC
400 GARDEN CITY PLAZA
SUITE 300
GARDEN CITY, NY 11530

| |
|----------|
| EXAMINER |
|----------|

LU, ZHIYU

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2618

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 03/15/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/521,744

Applicant(s)

RICHARDSON, MICHAEL
RICHARD

Examiner

Zhiyu Lu

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miya et al. (US2003/0186725) in view of Bader (US Patent#6597730).

Regarding claim 1, Miya et al. teach a method of calibrating an antenna and receiver system having multiple channels, each channel comprising an antenna, feed cable and associated receiver components (Fig. 14), the method comprising the steps of:

(i) applying a wideband calibration signal to each antenna feed, the similar characteristics to an operational wideband calibration signal having signal (paragraphs 0025-0027);

(ii) measuring a correlation response across a plurality of said channels (paragraphs 0026-0027);

(iii) deriving an estimate of signal transfer response for each of said plurality of channels based on the correlation response (paragraphs 0029-0030); and

(iv) applying compensation factors for each of said plurality of channels derived from the estimate of signal transfer response (paragraph 0031).

But, Miya et al. do not expressly disclose wherein said plurality of channels comprise all but a selected one of said multiple channels and wherein, at step (ii), the correlation response is measured with reference to said selected one channel.

Bader teaches selecting one of multiple channels as reference for comparison with all other channel receptions (column 3 line 57 to column 4 line 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate using one of multiple channels as reference taught by Bader into the method of Miya et al., in order to enhance accuracy of calibration.

Regarding claim 4, Miya et al. and Bader teach the limitation of claim 1.

Miya et al. teach said wideband calibration signal comprises a pseudo-random binary sequence modulated according to a modulation scheme providing similar modulation and bandwidth characteristics to those of the operational signal (paragraphs 0021-0026).

Regarding claim 5, Miya et al. and Bader teach the limitation of claim 1.

Miya et al. teach at step (iii), deriving said estimate of signal transfer response comprises determining the delay through the respective channel (paragraphs 0026-0030).

Regarding claim 6, Miya et al. and Bader teach the limitation of claim 1.

Art Unit: 2618

Miya et al. teach at step (iii), deriving said estimate of signal transfer response further comprises deriving phase characteristics of the respective channel (paragraphs 0026-0030).

Regarding claim 7, Miya et al. and Bader teach the limitation of claim 1.

Miya et al. teach at step (iii), deriving said estimate of signal transfer response further comprises deriving amplitude characteristics of the respective channel (paragraphs 0026-0030).

Regarding claim 8, Miya et al. and Bader teach the limitation of claim 1.

Miya et al. teach further comprising the step of:

(v) repeating steps (i) to (iv) to compensate for changes in signal transfer response over one or more of said plurality of channels (paragraphs 0033-0036, 0085).

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2618

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zhiyu Lu whose telephone number is (571) 272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zhiyu Lu
March 5, 2007


NAY MAUNG
SUPERVISORY PATENT EXAMINER